DOCUMENT RESUME

ED 348 180 RC 018 704

AUTHOR Ibanez-Velez, Carlos; And Others
TITLE Promoting Learning and Educational Delivery and Quality among "At Risk" U.S. Mexican and Native American Elementary School Children in Tucson, Arizona. A Pilot Project.
SPONS AGENCY Kellogg Foundation, Battle Creek, Mich.
PUB DATE 27 Jun 91
NOTE 37p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *American Indians; *Cultural Awareness; *Curriculum Development; Educational Anthropology; Elementary Education; Experiential Learning; *High Risk Students; *Mexican Americans; Parent Participation; *Parent Teacher Cooperation; Program Implementation
IDENTIFIERS Arizona (Tucson)

ABSTRACT

This report summarizes a pilot project that used home cultural resources and activities in promoting learning and enhancing educational delivery to at-risk U.S. Mexican and Native American elementary school children in grades three through six. Hollinger, C.E. Rose, and Lawrence Elementary schools (Arizona) were the at-risk sites chosen for the study. Eleven teachers from the three schools participated in weekly training sessions in basic ethnographic and anthropological methodology at the University of Arizona. Field work experience involved the selection of 3 target households by each teacher for a total of 97 household observations. Field notes followed a prepared questionnaire that emphasized the household's labor history and "funds of knowledge". "Funds of knowledge" are the array of skills, survival strategies, and home practices that may be utilized by the classroom teacher to appropriately contextualize mathematics, comprehension, and composition lessons. From this information learning modules were constructed and successfully taught to the students. Teachers attributed their successful participation within the households as a result of their anthropological training. Complete descriptions of project implementation and the approach used in accessing the Yaqui Community are included. Attachments include the project proposal and the project evaluation questionnaire. (LP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED348180

"Promoting Learning and Educational Delivery and Quality Among 'At Risk' U.S. Mexican and Native American Elementary School Children in Tucson, Arizona," A Pilot Project.

Report Prepared For

W.K. Kellogg Foundation

Project Team

Carlos Vélez-Ibáñez, Principal Investigator
Luis Moll, Co-Principal Investigator
Norma González, Co-Principal Investigator
Deborah Neff, Anthropology Extern

Bureau of Applied Research in Anthropology
University of Arizona
Tucson, Arizona

June 27, 1991

RC 018704

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Carlos Vélez-Ibáñez
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

"Promoting Learning and Educational Delivery and Quality among 'At Risk' U.S. Mexican and Native American Elementary School Children in Tucson, Arizona," A Pilot Project.

Project Summary.

1.0 Project Objectives and Evaluation Questions.

The pilot project to a degree successfully met its six specific objectives listed in its proposal (see attachment A, p.2). It proved strongly the feasibility of training teachers in "at risk" schools in fieldwork methodology in order to capture home learning resources, and the project validated the feasibility of training teachers to incorporate the available household data into useable learning modules. Teachers successfully carried out fieldwork within a sample of three instead of five "at risk" households selected from each of their classrooms. Also, the pilot project successfully tested the feasibility of teachers creating household-based learning modules and teachers successfully taught the constructed learning modules to their students. Last, it is probable given the cultural differences between the students treated in the pilot, that other regional student populations could be efficaciously exposed.

In response to the evaluation questions submitted on July 25, 1990 by the Kellogg Foundation (see attachment B.) only questions 1-4 and 7 were pertinent to the specific pilot project objectives since questions 5 and 6 would only be pertinent to the Multiethnic and Multistate Project to be proposed as the aftermath of the pilot projects (p. 2 of A). The appropriate questions reflect the

specific objectives of the project in that teachers did in fact use their gained observational skills and anthropological perspectives in interacting with the target children's families. The information was codified using word processing programs in such a manner so that non-confidential information was shared with other teachers in formal and informal settings. Teachers successfully created learning modules with the curriculum specialists of varying duration and successfully applied them to selected academic topics currently taught in schools. However, further development is needed in order to better integrate the specialist's assistance and much more lead time is needed in order to incorporate the learning modules in the month long time frame. The methodology as well has proven successful but there are added dimensions that the pilot has discovered that need further examination and development.

2.0 Major Strategies and Activities.

The success of the pilot rested on the professional relations established with the school district and households prior and during the formal training and implementation activities of the project.

2.1. Linkages.

Linkages were established in June, 1990 between the Associate Superintendent of Schools responsible for those schools in which the project was to take place were reinforced by personal visits, explanation of the project, and discussion of schools to be chosen. After a series further meetings and "fine tuning" adjustments proposed by the Associate Superintendent's office, the project was submitted for approval to the School District Evaluation office in

August of 1990. However, because of serious administrative changes in that office which delayed all projects, approval was not forthcoming until October 1, 1990.

2.2 Site Selection, Teacher Recruitment and Materials Preparation.

In the meanwhile, the research team was given informal access to the "at risk" sites, Hollinger, C.E. Rose schools, and Lawrence Elementary schools. A number of intense discussions during the period June-September had been initiated with the school principals of each school, and sensitive negotiations were conducted with authorities of the Yaqui tribe since Lawrence Elementary had a large proportion of its students living on the Yaqui reservation. Between September and late November numerous individual contacts with teachers were made, site visitations conducted, project presentations initiated, and final teacher recruitment was accomplished by November 15, 1990 with the agreed participation of eleven teachers. However, final district approval was not forthcoming until the October 1, 1990 date.

Simultaneous to these activities, materials for use in ethnographic training were developed including a comprehensive reader, household data for classroom use, and pretested and tested household questionnaires and child questionnaires (see Appendix C).

2.3 Ethnographic and Fieldwork Training of Teachers.

Actual teacher training was conducted between October 1, 1990 and December, 1990. Weekly training sessions were held in basic ethnographic methodology at the University of Arizona. Numerous

on-site sessions at the individual schools were also conducted in order to refine interviewing skills and address issues particular to the individual school populations. Intensive instruction of computer assisted software was also provided and learned. Practice fieldwork was conducted on non-site households, questionnaires were timed, team collaboration was tested, and fieldnote preparation was emphasized.

2.4 Fieldwork Experience.

The process of fieldwork was initiated by the selection of three target households by each teacher and was conducted between February 19 and May 5, 1991. Although the project had originally called for five households, the teachers and anthropologists agreed to decrease the number to five because of both logistical and contact difficulties. However, the target households proved to more than adequate for the assigned objectives of the project. A total of 97 household observations were accomplished by the eleven teachers. Fieldnotes followed a prepared questionnaire that emphasized the household's labor history and "Funds of Knowledge" that could be used for classroom use. Relations between teachers and parents became such that for the first time in the history of most of the households educational authorities were in their homes for non-punitive reasons and the relationships of trust and respect established cannot be exaggerated. The anthropological fieldwork method proved its value and approach. We will elaborate this further in the report.

2.5 Learning Modules.

Learning modules were constructed during the month of May either individually or as teams according to the preferences of the teachers while the length of each also was determined by these professionals. The impact of the consultants was limited but the math and science presentation seemed the most efficacious. The learning modules were successful as described by teachers, observed by the anthropologists, and documented by video tape. Although it is impossible to state if specific skill areas were improved, there is no doubt that for most teachers, the participation of students' and their households' "funds of knowledge" in the formation, design and implementation of the modules verified the original hypothesis of the project; that is, that children brought with them from home, valuable learning resources that could be tapped for classroom instruction and which improves not only class participation but the learning environment and relationship between teachers, students, and parents in households.

2.6 Teacher Evaluations.

The project asked for summative remarks that evaluated the pilot project. Individual interviews were conducted during the months of May-June of each teacher on training, fieldwork, consultants, and learning modules and their effects if any on instruction. Basically, most teachers attributed their successful participation within the households as the aftermath of their anthropological training. For most, fundamental attitudinal changes developed in regard to parental concern for their children's education. As well, most teachers came to fundamentally recognize and appreciate the basic "funds of knowledge" children

carried with them into the schools. Most teachers came to realize that these funds were rich learning resources they could utilize for instructional purposes. Most teachers fundamentally established positive and lasting relationships of mutual respect and reciprocity with parents and students as well as to other siblings in school. The effect on children's responses to these fundamental shifts by teachers was noticeable and captured by their increased participation and involvement in the learning modules but as well in other daily instruction. Most of the critical commentary by teachers was focussed on the lack of available time to carry out project objectives rather than with difficulty with project objectives.

Project Processes

Implementation.

The implementation of innovative educational programs within existing instructional systems inherently presents a number of challenges and opportunities for diverse outcomes. Since the base organizational formations of most schools have been in place for a long period of time, the introduction of non-traditional methodologies is an entrance into the worlds of "what could be" and "why not?" in educational systems.

The first phase of the Kellogg Pilot Project, "Promoting Learning and Educational Delivery and Quality Among "At Risk" U.S. Mexican and Native American Elementary School Children in Tucson Arizona," has highlighted diverse directions not only in refining the methodology and procedures of project implementation, but in suggesting further trajectories which could be pursued as a direct result of the research undertaken. In brief, the pilot project has, up to this point, enjoyed a reception by administrators, teachers, parents and students which has been overwhelmingly positive. Linkages have been forged between household and school which had been previously unexplored. Teacher's perspectives toward the contextualization of student's lives outside of the institutional setting have been radically altered, and parents have felt empowered in their child's schooling process by having direct access on an interpersonal basis to their child's teacher.

In order to delineate the processes of the educational innovation addressed, a brief recapitulation of the various stages of the Pilot Project are presented. One minor modification was

necessary and that is, the number of households was reduced from five to three, due to time constraints of the teachers.

Stage I: GAINING ACCESS

A) SELECTION OF SITES

The first step undertaken by researchers was the process of identification of sites. Since a cross-cultural perspective was a vital component of the project, demographic profiles of Tucson schools were studied. Tucson Unified School District, the largest in Tucson, was chosen as the target district because of its ethnic diversity, the clustering of "at risk" schools in predominantly minority neighborhoods, and the existence of key contacts within district administration which could facilitate the approval process. Two schools, C.E. Rose, and Hollinger, situated within the southside census tracts with the lowest per capita income in Tucson, the most serious overcrowding, standardized testing scores in the lower stanines, and significant numbers of Limited English Proficiency Students, were selected. The third school chosen, Richey, is located on the Yaqui Indian Reservation, and all Yaqui children from the Old Pascua village are within its boundaries.

B) GAINING DISTRICT APPROVAL

A key element in the implementation of any research agenda within educational institutional structure is the maintenance of a positive, on-going connection with the school district Research and Evaluation Department and the upper level administrators under whose purview the selected sites are located. Prior to the beginning of the 1990-91 school year, contact was made with Mr. Eugene Benton, Assistant Superintendent of the South

Region/Elementary schools. At a formal meeting, a detailed explanation of the research rationale and schedule was presented, as well an over-arching strategy for further avenues of study. Mr. Benton was keenly interested in the project and pledged his support for the two schools (Rose and Hollinger) under his jurisdiction. He suggested that we make a similar presentation to Ms. Julie Strand, Assistant Superintendent/Elementary Schools, North Region, in whose area Richey school is located. Immediately following this meeting, a packet was prepared for Ms. Strand, with a copy of the pilot proposal and an explanation of the project goals. After several attempts to communicate with her, we were informed through her Administrative Assistant that she would withhold her approval pending the review by the Research and Evaluation Office.

Research and Evaluation Office Approval

Immediately prior to the submission of the "Request to Conduct Research Within the District" forms, a conference of Principal and Co-Principal Investigators, Dr. Carlos Velez-Ibañez and Dr. Luis Moll, and Norma Gonzalez was held, in which we opted to deviate slightly from the written format of the proposal. Since teachers in general suffer from a surfeit of extra-curricular school-related activities, and since the effective completion of this project required a weighty commitment in terms of time, it was recommended that we suggest to TUSD the possibility of "Release Time" for the teachers on Fridays, in order for them to undergo training and carry out fieldwork in a manner that did not intrude extensively on their private time. We in turn would then reimburse the school district for the cost of substitute teachers for the

days the teachers were out of the classroom. The completed Request Forms and Prospectus were submitted to the Research and Evaluation Office in August, 1990. In addition to these forms, the University of Arizona requires Human Subjects Approval forms which safeguard the confidentiality of data collected during interview procedures. These were also submitted.

Due to budgetary cutbacks in the R&E Office, the proposal was not addressed for several weeks. At the time that it was reviewed, the Research Committee determined that the proposal was a "Staff Development" program, rather than strictly a research project, in the narrow sense of the term. It was approved by the R&E committee, but rather than giving the final endorsement, it was decided to route the proposal to another panel, one dealing with staff development and instruction.

On September 27, 1990, we received notice from Dr. Pi Irwin that the Regional Assistant Superintendents had reviewed the proposed research request, and found it to be worthy of consideration. However, since the instructional programs at the schools had already been set, it was suggested to us that the study be implemented for the school year 1991-92. Upon receipt of this letter, we communicated with Dr. Irwin and explained that the curriculum units would augment, rather than pre-empt the programmed instructional units, and that the schedules would not be negatively impacted. We also indicated that Mr. Gene Benton, who was absent from the meeting with the other Regional Assistant Superintendants, had relayed his support.

Dr. Irwin indicated that she would agree to a second review of

the project, pending her conversation with Mr. Benton, and on October 1st, 1990, we did receive final District approval for conducting the study. Subsequent to this approval, a meeting was held with the principals from the schools and Mr. Gene Benton. At this time, Mr. Benton indicated that release time, while in theory a viable option for the training and fieldwork sessions, had been reduced substantially by administrative mandate, and asked that we restrain the use of release time to a total of two days.

C) ACCESS TO THE YAQUI COMMUNITY

From the inception of the project, great care has been taken in formulating constructive avenues of interaction with the Yaqui community. Because the Yaqui community has reacted in the past to certain anthropological descriptions, a position of great forethought and deliberation was undertaken prior to approaching the community. Since Yaqui children experience an extraordinary drop-out rate (between 70 and 80%), they are among the most "at risk" students in the district, and could benefit greatly from programs which increase the congruence between school and household. Having been accorded Native American status in 1978, any research undertaken on the reservation must have the approval of the Language and Culture Commission of the Yaqui Tribal Council. In order to properly follow protocol, a meeting was held on August 30, 1990 with Mercy Whitlock, Project Specialist in the Title VII Yaqui/English Project of TUSD. Upon familiarization with the project goals, she indicated, at a subsequent meeting on September 6, 1990, the following concerns:

*****The short period of ethnographic training that the teachers

would undergo would not sufficiently prepare them to remove their "cultural blinders" and see past the "beads and feathers" approach to Native American education.

*****Teachers, in spite of training and workshops, often deal on a surface level with Native American culture.

*****There is a "revolving door" syndrome, with teachers being trained and then leaving for other schoools in a year or two.

*****Yaqui members of the community, in the form of teacher's aides, are already being utilized as resources. Training aides to accompany teachers might be an option.

*****Confidentiality of field notes is imperative.

*****Availability of curriculum units whould be made available to TUSD and proper credit rendered to Yaqui input.

*****Time constraints of teachers should be a major consideration in project planning.

As a member of the Language and Culture Commission, Ms. Whitlock indicated that she would bring the project up informally and would inform us of any procedural requirements. She also supplied us with a copy of the "Pascua Yaqui Tribe Language Policy", which states in part,

"The Yaqui language is a gift from Itom Achai, the Creator to our people and, therefore, shall be treated with respect.

Our ancient language is the foundation of our cultural and spiritual heritage without which we could not exist in the manner that our Creator intended.

Education is the transmission of culture and values, therefore, we declare that Yaqui education shall be the means for

the transmission of the Yaqui language and spiritual and cultural heritage. We further declare that all aspects of the educational process shall reflect the beauty of our Yaqui language, culture and values.

It shall be the policy of the Pascua Yaqui Tribe that no member of the Tribe shall be coerced by any outside non-Yaqui Tribe authority or system to deny or debase the Yaqui language."

The document itself outlines the position on the tribe on the quality of education its members receive. It remains in our files and has been referred to on numerous occasions.

Ms. Whitlock also suggested that we speak to Betty Garcia, principal of Richey school, located on the Old Pascua Reservation.

Selection of Yaqui School Site

In mid-September, contact was made with Ms. Garcia. Although she indicated her agreement with the theoretical premises and rationale, Ms. Garcia firmly asserted that she felt the Old Pascua community "had been studied to death", and that there would be a great deal of resistance from community members to "intrusions" into their households. She strongly suggested that we approach the principal of Lawrence Elementary, located on the New Pascua village, the newer Yaqui reservation, where many of the Yaqui families have relocated in the last ten years.

Lawrence has an ethnic composition of approximately 50% Yaqui, 30% U.S. Mexican, and 20% Anglo. The principal, Dr. Jesus de la Garza, was very receptive to the idea of the project, and commented that he had just written an article for the school newsletter

regarding the connections between school and home. He wholeheartedly endorsed the project, and scheduled a presentation made to the staff at the next available opening. He also indicated that contact should be made with Greg Madril, the Johnson-O'Malley Educational Program co-ordinator for the Yaqui Tribe.

Historical Perspective of Yaqui Community

Greg Madril, our key educational contact within the Yaqui tribal structure, consented to an extensive interview which helped to contextualize the household environments of many of the Lawrence students. The following points index aspects of the Yaqui community which highlight the ways in which Yaqui culture and experience are unique from both Mexican-American and other Native American communities:

*****New Pascua is an emerging community with in-migration by Yaquis from Marana (Yoem Pueblo), Barrio Libre, Guadalupe, and even from California, Texas and New Mexico.

*****Because of this nascent identity, younger Yaquis have struggled with a sense of self. Historically, Yaquis have assimilated into Mexican communities in the U.S. for fear of reprisals from both the Mexican and U.S. Federal government. Parents of school-age children were most likely warned not to speak Yaqui, but to emphasize Spanish, for fear of being repatriated to Mexico. Much of the Yaqui cultural and linguistic heritage has been lost due to these fears. The Mexican government harbored an actively genocidal policy towards Yaquis, offering bounties, up until the 1930's.

****The issue of what constitutes Yaqui culture and identity is an

emergent one, currently being negotiated in various arenas including the question of the role of parents and schools in promoting Yaqui culture. Yaqui funds of knowledge highlighted in our initial research include (1) Yaqui language (2) traditional Yaqui Cuaresma (Lenten) ceremonies, and (3) extended kin and compadrazgo (god-parent) relationships. Other funds of knowledge found in Mexican American households also applied to Yaqui households as well.

*****Yaqui children in bilingual programs seem to fare worse than those in monolingual English programs. The supposition here is that bilingual teachers often stress a standard dialect which the children are sometimes unfamiliar with.

Numerous areas of concern were raised for the Yaqui community, and have been transcribed en extenso for later follow-up. Mr. Madril also provided references and knowledge pertaining to resources, initiating a partnership relation between the project and the Johnson O'Malley component of the Yaqui tribe. Mr. Madril was instrumental in advising the Yaqui Tribal Council about the project and agreed to provide assistance when the fieldwork process is initiated in the community.

Stage 2: RECRUITMENT OF TEACHERS

A) Initial Contact with Principals/Teachers

Initial telephone contact with the principals of the three targeted schools explained the overall goals of the projects. All three principals were supportive and eager to participate. Dates and times for a more detailed debriefing were arranged for all

principals. After these individual contacts, an on-site staff presentation to teachers from the three schools was agreed upon. At each of these presentations, the project was explained, time concerns were addressed, and all interested teachers were asked to submit their names to their respective principals.

Due to scheduling conflicts for staff meetings, our final presentation to the teachers was made in mid-November. By the end of November, eleven teachers from the three schools had agreed to participate.

Stage 3: ETHNOGRAPHIC TRAINING

While approval was pending, and final recruitment of teachers was taking place, the development of the instructional materials for use in the ethnographic training were developed. A comprehensive Reader was developed, delineating issues in (1) ethnographic methodology, (2) qualitative analysis, (3) comparative and cross-cultural case studies of children, households and communities, and (4) the application of fieldwork data in the classroom. Additionally, materials based on the "Funds of Knowledge" concept were compiled. Detailed questionnaires in both English and Spanish were developed for each of the three interviews within the households, as well as a "child questionnaire" for the target student.

The first four training sessions addressed basic ethnographic methodology. Participants from the project staff included Dr. Carlos Velez-Ibanez (Anthropologist), Principal Investigator; Dr. Luis Moll (Professor of Education), Co-Principal Investigator; Norma Gonzales (Anthropologist), Project Coordinator; Deborah Neff

(Anthropologist), Assistant *; and two advanced graduate student Research Assistant/Anthropologists: Javier Tapia and Ramon Gomez.[1]

This team approach, initiated at the first training meeting, has continued to provide a cross-fertilization of ideas and perspectives in conjunction with discussions with teachers throughout the implementation of the project. The majority of the staff has also been involved in some aspect of the previous Community Literacy Project (CLP) which provided most of the background data for the current pilot study.

Issues in the uses of ethnographic and qualitative techniques, ethnographic bias, ethics and confidentiality, synchronic vs. diachronic measures, linguistic variables, non-verbal communication, participant-observational skills and theoretical overviews were presented. Additionally, the systems of networks, exchange and reciprocity among U.S. Mexican families were illustrated as case studies from the teachers themselves were presented. Video segements depicting a south-side U.S. Mexican family were analyzed and discussed. Role-playing in interviewing techniques was presented to the group, as well as an introduction to the computer input of data from the field work experience. In addition to the "teacher as learner" model which began to emerge in these sessions, a dialogue between teachers and anthropologists was initiated, laying the groundwork for the collaborative, teamwork approach that has continued throughout the project.

After these group sessions, on-site sessions at the individual schools were conducted in order to refine interviewing skills and

address issues particular to the school population. As part of the evaluation process, teachers were supplied with a journal and asked to chronicle their experiences with the project from a pre-training point in time to a post-curriculum construction point. A pre-training attitudinal assessment of teachers was also carried out, indicating issues to be addressed in terms of teachers' needs, expectations, and limitations.

Stage 4: FIELDWORK EXPERIENCE

The process of fieldwork was initated by the selection of three target households by each teacher. An informal explanation of the project as well as a request to participate was undertaken by each teacher. Subsequent to this informal, exploratory contact, letters, in both English and Spanish, were sent from the Bureau of Applied Research in Anthropology to the prospective informants, detailing the scope of the project and the benefits of improved educational delivery to their children. Teachers were asked to select children from all points in the educational spectrum, that is, students who were performing well, others in academic difficulties, and those judged to be at an average point. Additionally, they were asked to select families which were intact, that is with both the mother and father living within the household. Two "blended families" were also included in the study, and "mother" and "father" were defined broadly to mean "social parents", since in some of the households the children had been fathered by different males, and in one household the child's grandfather acted as "social father."

Practice interviews were held in home of BARA staff with the

assistance of staff anthropologists. The overall fieldwork experience was set up to include one anthropologist and one teacher trained in ethnography attending each household. We found that this team approach was extremely successful. While the teachers had the classroom education and experience and a natural entree into the homes through their bond with the child, the anthropologists brought ethnographic experience and training, and a theoretical background which emphasized the goal of value-free cultural sensitivity and a broad perspective of the salience of cultural differences in the learning process. The anthropologist was able to provide support for the teacher, to answer questions that the teacher or parents might have about the project or interview procedure, to assist in making observations and to follow through with emergent areas of investigation, and to make recommendations to improve teacher expertise in ethnographic interviewing. One result of this collabation is the emergence of the "teacher-anthropologist," a culturally sensitive, innovative, and more broadly theoretically and experientially-based educator. Two of our teachers, pursuing graduate studies in Anthropology and Education, have provided particularly strong bridges of understanding into the cultural components of teaching, through the interface of their experiences in the homes and classroom.

Due to the sensitivity of Yaqui households to interviewing by outsiders, the first interview included Yaqui teacher aides familiar with the community. Four Lawrence teachers met with Greg Madrill and the aides for a brief discussion of the Yaqui community immediately prior to that first interview. This proved to be a

successful strategy for entree into Yaqui homes. One of our teachers is a Yaqui herself, which provides a tremendous resource for us in the Yaqui community.

A total of twenty-five households were studied with over ninety-seven interviews conducted. Three household interviews with each family, plus a child interview with the target child were carried out. All teachers selected three families, except for three teachers who, due to time constraints, were only able to complete the process with two families. Teachers were left with the option of following the questionaires closely or using them as mere guidelines. They were encouraged to follow through with emergent topics of interest, which is one area where the presence of the anthropologist was very helpful. Much discussion and the establishment of rapport revolved around discussions with parents about the target child. Parents were informed about school activities in which they could become involved and often asked advice of teachers regarding improvement of the child's performance. Most of the interviews were conducted in Spanish by bilingual teachers.

Assistance and direction for interview note-taking was provided by project staff. Tape recorders, batteries, tapes, computer disks, and two portable computers were provided to teachers. In addition to regular meetings, visits, and correspondence of project staff at the schools, ongoing study group meetings were held during the final stage of the fieldwork process. Teachers were provided with copies of the notes from other project teachers in order to broaden their perspectives and to provide

direction in note-taking.

Stage Five: Funds of Knowledge Analysis

Parents were across the board very supportive and cooperative. Both project staff and teachers were amazed at how open parents were about their lives and their attitudes towards education. Teachers attempted to reciprocate their contribution with small gifts and assistance to families where possible.

We found that without leave-time the work load was over-burdening for many of our teachers. In spite of this, teachers unanimously agreed that it was "worth it". Laura, a second grade teacher reports:

"I guess I just started off pretty pessimistic about parent involvement, I just didn't think it was worth my time. I started school late and never sent a letter home -- I didn't think it would make a difference. After visiting even the first family I started to realize how much they really cared and wanted to talk about their child's education... After seeing these families I decided to try something new. So I held a midterm parent conference. I just invited them to come into the classroom to teach them some things they could do with their kids during the summer so that they'd be ready for third grade. I sent eleven letters and six parents showed up -- a really good turnout. I guess for me personally one achievement from the program is that it changed my whole attitude about parent participation. And that the effort was worth it... After the meeting, some of the parents ended up staying. I got to find out what their jobs were, what their schedules were and it was

really interesting. I think from having asked so many questions during the interview process I was more comfortable getting to know them."

We are already seeing a change in the classroom. Cathy, a sixth grad bilingual teacher reports: "I think bringing in what the kids are familiar with will always help. Something that you know the kids are interested in and are confident about. That always helps... Actually I have seen a change in the kids' attitudes where I went into the home... They are more confident and outgoing in the classroom. They treat me a little differently... I was thrilled to see one particular girl who had been so quiet start to express an opinion and stand up for herself."

Our ongoing discussions during these study groups highlight the multidimensional relationships that are being forged with the child, a natural extension of the exchange networks and funds of knowledge concepts so central to our study. One teacher reports: "We are establishing a new level of relationship with the child and the parents. Its starting to click...It's also made a difference in my relationship with their brothers and sisters, and that's something I really enjoy. I see them in school.. it ties me into other classrooms now -- and some of them will be my future students."

The interview notes have just recently been compiled. Both teachers and project staff are amazed and encouraged by the data we have collected -- everything from cross-border activities to exchange networks, technical funds of knowledge to attitudinal resources. These households contain knowledge about literacy,

employment strategies, the mobilization of social relations, and other socially and intellectually rich systematic strategies of survival. A powerful sense of the lives of the children outside of the classroom is emerging, as well as a direction for the incorporation of these funds of knowledge within multiplex relationships in the classroom.

We are in the process of completing interviews with teachers in order to further assess the needs of the project: how experiences have helped the teacher in the classroom and in relationships with parents, how the parents are encouraged to participate in the school, and so forth. Several suggestions have already emerged from the study group meetings we have had since the onset of the fieldwork component, suggestions which will be addressed in a future report when all of our data and needs assessments have been analyzed. The preliminary analysis of the data and the unanimous enthusiasm of both teachers, parents, and project staff is very encouraging, and many of the present participants have indicated their desire to continue with the next phase of the project.

1. Deborah Neff joined the project in January to assist Norma Gonzalez. Deborah has worked extensively in education with Native American communities in Tucson and is currently finishing her Ph.D. in Anthropology.

ATTACHMENTS A & B

ATTACHMENT A

PROMOTING LEARNING AND EDUCATIONAL DELIVERY AND QUALITY AMONG "AT RISK" U.S. MEXICAN AND NATIVE AMERICAN ELEMENTARY SCHOOL CHILDREN IN TUCSON ARIZONA: A PILOT PROJECT

Carlos G. Velez-Ibanez, Ph.D.
Principal Project Investigator
Bureau of Applied Research in Anthropology
University of Arizona

Luis C. Moll, Ph.D.
Co-Principal Investigator
College of Education
University of Arizona

James B. Greenberg, Ph.D.
Co-Principal Investigator
Bureau of Applied Research in Anthropology
University of Arizona

Norma Gonzalez, Ph.D. Candidate
Co-Principal Investigator
Bureau of Applied Research in Anthropology
University of Arizona

A Cooperative Project of the Bureau of Applied Research in Anthropologyand the College of Education of the University of Arizona

June 17, 1990

Promoting Learning and Educational Delivery and Quality among "At Risk" U.S. Mexican and Native American Elementary School Children in Tucson Arizona: a Pilot Project.

Purpose of the Work.

The purpose of the proposal is to describe an educational pilot project that seeks to establish the groundwork for an extensive multistate and multiethnic educational project. The initial twelve month pilot will seek to verify the proposition that the utilization of home resources and activities within the pedagogical and curricular process of the school will promote learning and enhance educational delivery and quality to "at risk" U.S. Mexican and Native American elementary school children in grades three to six in Tucson, Arizona. The resulting assessment and evaluation of pilot success will determine the efficacy and fruitfulness of pursuing a broader application of the principles and activities used in the initial pilot.

Objectives of the Overall Multiethnic and Multistate Project.

1.0 To improve the mathematical and computational skills of "at risk" elementary grade school students.

2.0 To improve the conceptual abilities and comprehension skills of at risk elementary grade school students.

3.0 To improve the compositional and literacy skills of "at risk" elementary grade school students.

4.0 To increase the probability of school continuance into the secondary grades of "at risk" elementary grade school students.

5.0 To increase the participation of parents of "at risk" elementary grade school students in support of the students' academic work and as contributors to the content of lessons.

Specific Objectives of the Pilot Project.

1.0 To test the feasibility of training teachers in "at risk" schools in fieldwork methodology in order to capture home learning resources.

2.0 To test the feasibility of training teachers to incorporate available household data into useable learning modules for classroom use.

3.0 To test the feasibility of teachers carrying out fieldwork within a sample of five "at risk" households selected from each of their classrooms.

4.0 To test the feasibility of teachers creating household-based learning modules for classroom use which feature integrated mathematical, compositional, and critical thinking components.

5.0 To test the feasibility of teachers successfully teaching the constructed learning modules as measured by student participation and response in their respective "at risk" schools.

6.0 To test the efficacy of this approach to other regions, ethnic populations, and contexts in which "at risk" students are present.

Rationale.

The term "at risk" students is applicable to describe students who come from economically poor backgrounds, who have limited proficiency in English, who have high absentee rates, and who are moved frequently from school to school. These students' performance on computational and literacy standardized measures such as the Iowa Test for Basic Skills will average a year or more behind national averages and below grade level. It will be these students who will more than likely be the source for school "drop out." In Tucson, Arizona, portions of the elementary school population is "at risk" and among those at risk are relatively large numbers of U.S. Mexican and Native American students.[1]

The proposed pilot project seeks to utilize innovative home-to-school resources in order to improve the school performance of a selected pilot sample of students in "at risk" schools. The basic mechanism for such innovation are classroom teachers who will be trained to organize home resources for classroom use.

Home to School Resources: Untapped "Funds of Knowledge" for Educational Enhancement.

The underlying premise for the proposed pilot project is that for the most part existing classroom curriculum and pedagogical practices seriously underestimate the important learning resources that "at risk" students carry with them into the classroom. Equally, most educational institutions underestimate the invaluable learning resources readily available even within seemingly economically poor households and families.

It is our contention that for the most part "at risk" students and the families from which they originate are rich in what previous works we have termed "Funds of Knowledge."[2] These Funds of Knowledge are the inventories of information and knowledge that are contained within every household and include an impressive array of skills, survival strategies, and home practices that may be utilized by the classroom teacher to appropriately contextualize mathematics, comprehension, and composition lessons.

"Funds of Knowledge" are historically derived so that for Southwestern peoples the knowledge base rested on a largely rural culture which is still retained by portions of both populations. Thus for many Mexican and Native American families a wide range of knowledge and skills had to be mastered. In order to cope in such contexts, and to adapt to changing circumstances household members had to be generalists and possess a wide range of complex information. They understood the characteristics of the local ecosystems--soils, plants, pests, hydrology, and weather.[3] Given the frailty and complexity of arid land environments in the Southwestern region, water management, flood control, and climate variations were important parts of the knowledge base for survival. Equally knowledge of animal husbandry, range management and veterinary medicine were part of the "natural systems" of household information as is knowledge and skills in construction and repair in order to avoid reliance on specialists. This required bodies of knowledge about building plans, masonry carpentry, and electrical wiring, as well as formulas for mixing cement, mortar, and adobe. household and work began to separate. In addition, folk medicine including the knowledge of home remedies, medicinal herbs, first aid, and a knowledge of anatomy seems quite common.

Taken together these largely rural skills, experience, technical knowledge of habitat and survival which demanded originality and manipulation, made up, and, in part, still make up part of the repertoire of information which we have termed "funds of knowledge" for much of the Arizona-Sonora U.S. Mexican and Native American population.[4]

An important premise in using home contexts for learning is that U.S. Mexican and Native American children who are even "at risk" also have access to these "funds of knowledge" at home, but seldom do teachers utilize such "funds" as resources or references for learning. Too often students are presented as particularly not ready for instruction in the early grades and cite the evidence of parental low level of education, low income, presumed low educational aspirations, a supposed lack of emphasis on learning and achievement at home, and an assumed absence of learning opportunities for children at home.[5]

Teachers assume that "at risk' students are not only not ready to learn during the primary grades but as well are not ready to read and have rudimentary knowledge of numerical manipulation. Such assumptions then build curriculum around easily manipulable second language tasks such as teaching letter sounds-- "oral language"; repetitive computational skill acquisition without a practice context in real space, activity, and time; and recitation without comprehension, cause-effect reasoning, interpretation, or inference and without the tentative and problematic nature of understanding as probablistic. Thus learning is largely "de-contextualized"

which is exactly the opposite to the manner in which children emerge as thinking beings in the first place.

Yet our own work[6] clearly shows that "at risk" students have been exposed and have manipulated their environments along the learning dimensions we have described as "funds of knowledge" and that regardless of language, comprehensive learning resources are readily available within the home environment to be used to enhance learning in the classroom. "At risk" children have had the benefit of watching and participating in the construction of their homes, repairing automobiles and bicycles, cooking, growing gardens, holding yard sales, reading receipts and contracts for non-English literate parents, organizing familial celebrations, travels to relatives in Mexico and the reservation, and hunting and dressing animals.

They are taught to manipulate and experiment in many of these domains and are constrained by only two considerations: first, will the child be injured, and second, will the experimentation prove too costly. Outside of these two considerations, our work among "at risk" children in the households is that not only are they ready to learn but have already mastered learning arenas much beyond the recognition given by school authorities.

Teacher Preparation and Training in Funds of Knowledge: The Key to the Incorporation of Home Learning Resources in the Classroom.

An important finding from our previous work is that the exceptional teachers were impatient to become participants, observers, and fieldworkers in the discovery of the "funds of knowledge" and to transform such funds into meaningful curriculum. We have concluded that although teachers appreciated and partially used the "funds of knowledge" within their classrooms that the anthropologists discovered, that in fact the utility of information was directly associated with the quality of participation by the teacher in the original acquisition and understanding of that knowledge. It became obvious in the original work, that the exceptional teachers often asked much better "learning" questions than the anthropologists of familial members, were much more insightful into the processes of indirect and direct learning, and came to appreciate at a profound personal emotional level the underlying wealth of household experience.

On the other hand, we did not develop this potential and most of the teachers lacked the systematic ability to discover, observe, collect, organize, and develop the information into useable and meaningful curricular and pedagogical learning activities once presented to them. They lacked the underlying ability and skill to patiently ferret out the most meaningful units of knowledge about households, were often not able to penetrate surface information for its underlying developmental value, and often could not recognize the value of the information provided by the

anthropologists. The latter was very much a consequence of institutional prejudice of what constituted learning so that parents who were literate in Spanish and often read and wrote in the language were often regarded as "illiterate" and their children as offspring of "illiterates." Teachers too often dismissed the "reading readiness" of such children and concentrated on phonemic preparation rather than on comprehension.

Thus based on our previous work, we are convinced that with proper training and participation in hands-on anthropological fieldwork on the "Funds of Knowledge" within the households of the children whom they are to teach, and coupled together with direct training in the incorporation of such funds within usable learning activities, that teachers will directly use their discoveries to enhance the educational experience of the students.

The Training and Fieldwork Program .

For the pilot phase of the program we propose to intensively train 10 teachers from third to sixth grades in "at risk" schools in two phases: Phase I. is training in participant observation and the collection of fieldwork household information; coding and organizing household information; and systematic incorporation of fieldwork data into useable learning activities. Phase II. will consist of teacher fieldwork among selected households from their respective classes; and fifth incorporation of household funds of knowledge by the ten teachers within learning modules.

Phase I.

Participant observation will be taught with special emphasis on an open-ended, flexible, and concrete inquiry; in-depth, qualitative case study approach and design; and the use of direct observation with other methods of gathering information. Instruction will include systematic "spot" observations; closed and open ended interviewing, in-depth interviews, and life histories; use of household questionnaires; and the gathering of documents and household artifacts such as photographs, tapes, and journals.

Second. learning to systematically code and file by sorting, sifting, constructing and reconstructing household funds of knowledge will be of primary importance. We will provide an already computerized data base from which to practice and utilize 150 data files and a locator program "Gofer" to allow quick grouping and retrieval of information by topic on the entire data base.

Third, the ten teachers selected will be asked to construct hypothetical "learning modules" based on the data base of funds of knowledge already generated from previous work. Assisted by curriculum specialists expert in incorporating such funds within computational, compositional, and "critical thinking" learning

*modules, the focus of such modules will concentrate on the communicative role of learning. From this perspective, the social and cognitive functions of learning are inseparable. Learning computational skills for example is not very different from learning grammar. If the language is not known the student will have a much more difficult time assimilating the subtleties of the main features of the language and therefore will be forced to memorize. On the other hand, if time is spent doing activities which tell children why they need to be able to obtain such answers, then the connection between use and skill become bridged. The "funds of knowledge" from the household provide students with not only analogy for use but also may constitute the bases of activity by which to increase mathematical comprehension rather than merely skill.

Training Schedule of Activities: September 15, 1990-December 15, 1991. Initial recruitment of teachers will commence September 15, 1990 with instruction once a week for 8 weeks to begin October 15, 1990 and end December 15, 1990.

Phase II.

Sample selection of five households among each of the ten teacher's classroom for intensive fieldwork by teachers. Following the outlines of Phase I., each teacher will be required to provide fieldwork reports and information to each of the other teachers participating as well as to the project organizers. Organizational assistance will be provided to the teachers by the project organizers in their observations upon a need basis, in the assembly of household information, coding and filing, and in the reconstruction of household funds of knowledge.

The ten teachers will form a study group the goal of which is to organize, synthesize, and to construct learning modules from funds of knowledge for classroom use. The project will assist the ten teachers in this formulation by providing specific curriculum specialists in mathematics, composition, and critical thinking. Each teacher will construct an integrated, one-month learning module based on the work carried out in the field work segment.

Schedule of Activities: January 5, 1991-March 30, 1991 Fieldwork [three visits for each of five families by each teacher]. April 1-30 construction of learning modules. May 1-May 25 incorporation of learning module.

Assessment and Evaluation.

The assessment and evaluation of the proposed pilot rests partially on the response, activities, and evaluation of project success in both phases by the participant teachers. Teachers will be afforded the opportunity to evaluate the efficacy of Phase I by their success and/or failure in Phase II. The success of Phase I is in

part measured by the ability of teachers to carry out the tasks of fieldwork in Phase II, by their ability to systematize the information collected, and by their ability to construct the integrated learning modules. The success of the teachers will rise and fall ultimately within the classroom so that students will play a key role in the evaluation of each of the learning modules developed by the teachers. Both teachers and students will be asked to evaluate project activities, their probable effects on learning, and the quality of the learning modules presented. These results will be important considerations in the development of a larger multistate and multiethnic proposal to the Kellogg foundation and the applicability of this approach to other regions, ethnic populations, and contexts.

Schedule of Activities: June 1-June 30, 1991. Assessment and Evaluation of impact of project on parents, teachers, students, and school program. Estimate of probable generalizability of pilot results from both open ended and structured questionnaire. Student interest and participation evaluated on the basis of participation in learning modules and effective ties between households and schools.

Final Report Write-Up: July 1, 1991-August 1, 1991. August 1-15, 1991 report discussions with Kellogg and evaluation of results for multistate and multiethnic proposal.

Endnotes

1. In Tucson, Arizona, the predominant "at risk" schools in the Tucson Unified School District, the largest district in the city, are located where high concentrations of U.S. Mexican, Native American, and African American populations reside. For example, in one neighborhood on the southside of Tucson in which over 80% of the population is U.S. Mexican, 90.5% of the local elementary school is of the same origin, has an above district absence rate, has a higher mobility rate than the district, in which 99.35 of the children are in free lunch programs, in which 40% are of limited English proficiency, and finally in which most of the indicators of academic achievement including mathematics, language, reading, word analysis, vocabulary, and listening are in the 30th percentile or below between the second and sixth grades.

2. See Carlos G. Velez-Ibanez (1988), Networks of Exchange Among Mexicans in the U.S. and Mexico: Local Level Mediating Responses to National and International Transformation, Urban Anthropology and Studies of cultural Systems and World Economic Development, Vol. 17 (1), Spring: pp. 27-51; _____ (1989), Transmission and Patterning of Funds of Knowledge: Shaping and Emergence of Confianza in U.S. Mexican Children. Paper delivered, Society for Applied Anthropology Annual Meeting, Santa Fe, New Mexico, April 5-9, 1989; _____ (n.d), Plural Strategies of Survival and Cultural Formation in U.S. Mexican Households in a Region of Dynamic Transformation. In Diagnosing America, S. Foreman, ed., in process.

3. The Spaniards who explored and settled in the regions of northern Sonora and southern Arizona as well as other parts of northwest Mexico and the southwestern United States, ventured into arid regions and found a physical and cultural environment quite unlike that discovered in middle America or the southeastern U.S. For one, this region had already been changed and Amerindians had carried out experiments in irrigated agriculture in which aridity still remained the outstanding environmental characteristic with which to cope. Without material and cultural inventions to adapt to such aridity, survival would not have been possible.

4. See especially Carlos G. Velez-Ibanez and James B. Greenberg, Formation and Transformation of Funds of Knowledge among U.S. Mexican Households in the Context of the Borderlands, In Urban Anthropology and Studies of Cultural Systems and World Economic Development. In Process.

5. This assertion was recently repeated by the Arizona State Superintendent of Public Instruction and quoted by the Arizona Daily Star, July 21, 1989.

6. The following outline is merely a descriptor of the categories of knowledge found in a sample of 30 household, U.S. Mexican households in which 81% of the household heads were born in Mexico, had an educational mean of 7.6 with a median of 6.0, 90% of whom were married couples, and income largely derived from a single source.

See Insert A

7. For example, the outstanding Funds-based, learning module developed by a participating teacher was one which was developed as the aftermath of parents visiting the classroom and demonstrating the construction techniques of building a home. This created the student interest in reading blueprints, figuring out the geometry of angles, the appropriate planning of infrastructure such as water,electricity, and sewage lines, and eventually led to interest in developing an entire learning module on the planning of an entire city. Such a learning module included the learning of basic design, architecture, broader infrastructure planning, and demographic and population movement.

ATTACHMENT B

EVALUATION QUESTIONS

To provide for our mutual evaluation of the project, annual progress reports should address, but not be limited to, these important questions:

1. Were the teachers able to use the anthropological skills they were taught when interacting with the target children's families?

2. Were the teachers able to codify the information they received when interacting with the families in such a way that the information could be shared with other teachers?

3. Were the teachers able to prepare hypothetical learning modules, with the assistance of curriculum specialists?

4. Were the teachers able to prepare month-long learning modules on selected academic topics currently being taught at the schools?

5. Did the project have an effect on reducing drop-outs in the schools?

6. Did the project enable the participating children to improve either local or national test scores?

7. Is the methodology sufficiently developed to attempt to carry it out in other areas?

2068Q